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     (FILE 'HOME' ENTERED AT 12:33:24 ON 23 JUL 2007)

     FILE 'CAPLUS, MEDLINE' ENTERED AT 12:33:37 ON 23 JUL 2007
L1             1 S ?AMINOALKYL AGAROSE (P) HEPARIN?
L2             0 S ?AMINOALKYL AGAROSE (P) POLYSACCHARIDE?
L3             1 S ?AMINOALKYL AGAROSE (P) ?SACCHARIDE?
L4             0 S ?AMINOALKYL AGAROSE (P) CARBOHY?
L5             0 S ?AMINOPHENYL AGAROSE (P) CARBOHY?
L6             2 S ?AMINOPHENYL AGAROSE (P) ?SACCHARIDE?
L7             0 S ?AMINOPHENYL SEPHAROSE (P) ?SACCHARIDE?
L8             0 S ?AMINOPHENYL SEPHAROSE (P) ?CARBOHY?
L9             2 S ?AMINOALKYL? SEPHAROSE (P) ?SACCHARIDE?
L10           37 S ?AMINO? SEPHAROSE (P) ?SACCHARIDE?
L11            2 S L10 AND FILTRATION?
L12           35 S L10 NOT L11
L13            0 S L12 AND AUTOCLAV?
L14           10 S L12 AND COUPL?
L15           27 S L10 NOT L14
L16            0 S ?AMINO? SEPHAROSE (P) BLOOD GROUP DETERMIN?
L17            6 S  SEPHAROSE (P) BLOOD GROUP DETERMIN?
L18           49 S ?AMINO? SEPHAROSE (P) MATRI?
L19            4 S L18 AND ?SACCHARIDE?
L20            5 S L18 AND ?SPACER?
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L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1981:564858 CAPLUS

DOCUMENT NUMBER: 95:164858

TITLE: Hydrophobic interaction chromatography of mucopolysaccharides. Examination of fundamental conditions for fractionation of heparin on hydrophobic gels

AUTHOR(S): Ogamo, Akira; Matsuzaki, Kimiyo; Uchiyama, Hideki; Nagasawa, Kinzo

CORPORATE SOURCE: Sch. Pharm. Sci., Kitasato Univ., Tokyo, 108, Japan

SOURCE: Journal of Chromatography (1981), 213(3), 439-51
CODEN: JOCRAM; ISSN: 0021-9673

DOCUMENT TYPE: Journal

LANGUAGE: English

AB For hydrophobic interaction chromatog. of mucopolysaccharides, some fundamental chromatog. conditions were examined mainly on a combination of phenyl-Sepharose CL 4B gel and heparin. Every parameter, such as column dimensions, amount of heparin applied, flow-rate, electrolyte, and acidity of elution medium, and temperature, influenced the distribution of heparin among the fractions separated Solns. of 1.0-4.0M (NH4)2SO in water or in 0.01M HCl were excellent eluants. Temperature effects were observed in the interactions of mucopolysaccharides and different types of hydrophobic gels. Com. hydrophobic gels of the following 2 types were examined: (1) hydrophobic gels without any ionizable function, such as phenyl- and octyl-Sepharose CL 4B gels and benzyl- and octyl-agarose gels, and (2) hydrophobic gels with some ionizable groups, such as isoureide and primary amino groups, such as alkyl-agarose and ω- aminoalkyl-agarose gels.

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1988:70870 CAPLUS
DOCUMENT NUMBER: 108:70870
TITLE: Purification and some characteristics of a β-galactoside binding soluble lectin from amphibian ovary
AUTHOR(S): De Cabutti, Nilda E. Fink; Caron, Michel; Joubert, Raymonde; Eloba, Maria Teresa; Bladier, Dominique; Herkovitz, Jorge
CORPORATE SOURCE: Inst. Biol. Reprod., Univ. Nacl. Lomas de Zamora, Lomas de Zamora, 1832, Argent.
SOURCE: FEBS Letters (1987), 223(2), 330-4
CODEN: FEBLAL; ISSN: 0014-5793
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Soluble exts. of Bufo ovaries agglutinate sialidase-treated rabbit erythrocytes. Unlike other amphibian lectins this agglutination activity does not require the presence of Ca2+. It is specifically inhibited by D-galactose and its derivs. Thiodi-D-galactoside is the most potent saccharide inhibitor, followed by lactose and methyl-β-D-galactoside. D-Fucose, D-glucose, and D-mannose do not inhibit the activity at concns. ≥100 mM. The lectin has been purified 500-fold to apparent homogeneity from the ovaries by salt extraction and affinity chromatog. on lactose-aminophenyl-agarose, with a yield of .apprx.0.2%. The mol. mass determined by gel filtration under native conditions was 30 kilodaltons (kDa). SDS-PAGE gave a mol. mass of 15 kDa, suggesting that the lectin is dimer. The lectin has an pI of 4.0 and contains a high proportion of acidic amino acids.

L6 ANSWER 2 OF 2 MEDLINE on STN
ACCESSION NUMBER: 88030076 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3666155
TITLE: Purification and some characteristics of a beta-galactoside binding soluble lectin from amphibian ovary.
AUTHOR: Fink de Cabutti N E; Caron M; Joubert R; Elola M T; Bladier D; Herkovitz J
CORPORATE SOURCE: Instituto de Biologia de la Reproducion y Desarrollo Embrionario, Universidad Nacional de Lomas de Zamora, Argentina.
SOURCE: FEBS letters, (1987 Nov 2) Vol. 223, No. 2, pp. 330-4.
Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198712
ENTRY DATE: Entered STN: 5 Mar 1990
Last Updated on STN: 5 Mar 1990
Entered Medline: 9 Dec 1987
AB Soluble extracts of Bufo ovaries agglutinate sialidase-treated rabbit erythrocytes. Unlike other amphibian lectins this agglutination activity does not require the presence of calcium ions. It is specifically inhibited by D-galactose and its derivatives. Thiodi-D-galactoside is the most potent saccharide inhibitor followed by lactose and methyl-beta-D-galactoside, respectively. D-Fucose, D-glucose and D-mannose do not inhibit the activity at concentrations at or above 100 mM. The lectin has been purified 500-fold to apparent homogeneity from the ovaries by salt extraction and affinity chromatography on lactose-aminophenyl-agarose, with a yield of about 0.2%. The molecular mass determined by gel filtration under native conditions was 30 kDa; polyacrylamide gel electrophoresis in SDS gave a molecular mass of 15 kDa, suggesting that the lectin is a dimer. The lectin has an isoelectric

point of 40 and contains a high proportion of acidic amino acids.

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1977:434899 CAPLUS
DOCUMENT NUMBER: 87:34899
TITLE: Purification of phospholipase C from Bacillus cereus by chromatography on aminoalkyl polysaccharide adsorbents
AUTHOR(S): Gerasimiene, G.; Glemza, A.; Kuliene, V.; Kulis, J.; Makariunaite, J.
CORPORATE SOURCE: All-Union Res. Inst. Appl. Enzymol., Vilnius, USSR
SOURCE: Biokhimiya (Moscow) (1977), 42(5), 919-25
CODEN: BIOHAO; ISSN: 0320-9725
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The purification of phospholipase C from B. cereus by chromatog. on aminoalkylpolysaccharide adsorbents was described. The dependence of the degree of enzyme purification on the amount of ligand and effect of pH and buffer systems on the adsorption-desorption of phospholipase were studied. At pH <9.0, phospholipase C was not retained by the adsorbents; it was purified 4-5-fold and ≤23-fold, when aminoalkyl-Sepharose and hexamethylenediamine-Sephadex were used, resp. With an increase in pH to 10.0, the enzyme was bound by the adsorbent and was eluted with a 40-90% yield of activity and 7-10-fold purification The resulting phospholipase C was highly purified and electrophoretically homogeneous. A mechanism of enzyme-adsorbent interaction was discussed.

L9 ANSWER 2 OF 2 MEDLINE on STN
ACCESSION NUMBER: 77242671 MEDLINE
DOCUMENT NUMBER: PubMed ID: 19100
TITLE: [Purification of phospholipase C from Bacillus cereus by chromatography on aminoalkylpolysaccharide adsorbents]. Khromatograficheskaia ochistka fosfolipazy s iz Bacillus cereus na aminoalkilpolisakharidnykh sorbentakh.
AUTHOR: Gerasimene G B; Glemzha A A; Kulene V V; Kulis Iu Iu; Makariunaite Iu P
SOURCE: Biokhimii a (Moscow, Russia), (1977 May) Vol. 42, No. 5, pp. 919-25.
Journal code: 0372667. ISSN: 0320-9725.
PUB. COUNTRY: USSR
DOCUMENT TYPE: (ENGLISH ABSTRACT)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Russian
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197710
ENTRY DATE: Entered STN: 14 Mar 1990
Last Updated on STN: 6 Feb 1995
Entered Medline: 14 Oct 1977
AB Purification of phospholipase C from Bac. cereus by chromatography on aminoalkylpolysaccharide adsorbents is described. The dependence of the degree of enzyme purification on the amount of ligant and effect of pH and buffer systems on the adsorption-desorption of phospholipase have been studied. At a pH below 9.0 phospholipase C is not retained by the adsorbents and is purified 4-5-fold and up to 23-fold, when aminoalkyl-Sepharose and hexamethylenediamine Sephadex are used respectively. With an increase in the pH value up to 10.0, the enzyme is bound by the adsorbent and is eluted with a 40-90% yield of activity and 7-10-fold purification. The resulting phospholipase C is highly purified and electrophoretically homogeneous. A mechanism of the enzyme-adsorbent interaction is discussed.

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:506252 CAPLUS
DOCUMENT NUMBER: 101:106252
TITLE: Studies on Turbatrix aceti β-N-acetylglucosaminidase: 1. Purification and physicochemical characterization
AUTHOR(S): Bedi, Gurrinder S.; Shah, Ramesh H.; Bahl, Om P.
CORPORATE SOURCE: Dep. Biol. Sci., State Univ. New York, Buffalo, NY, 14260, USA
SOURCE: Archives of Biochemistry and Biophysics (1984), 233(1), 237-50
CODEN: ABBIA4; ISSN: 0003-9861
DOCUMENT TYPE: Journal
LANGUAGE: English
AB N-Acetyl-β-D-glucosaminidase (I) was purified, from the culture medium of the nematode T. aceti, to homogeneity, as judged by electrophoresis in polyacrylamide gel and ultracentrifugation. The purification scheme involved concentration of the culture medium by ultrafiltration by an Amicon PM-30 membrane, precipitation, DEAE-Sephadex and Sephadex G-200 chromatog., and affinity chromatog. on succinyldiaminopropyl amino -Sepharose bearing the ligand p-aminophenyl 2-acetamido-2-deoxy-1-thio-β-D-glucopyranoside. The mol. weight of the enzyme was 112,000 and 124,000, as determined by polyacrylamide gel electrophoresis and by gel filtration through Sephacryl S-200, resp. The enzyme showed a pH optimum of 4.8 for I activity and 5.4 for N-acetylgalactosaminidase. The detailed substrate specificity studies were carried out on both synthetic and natural oligosaccharides and glycopeptides. The chitin oligosaccharides and asialo-agalacto complex-type glycoproteins, as well as high-mannose-type glycoproteins (such as fetuin and ovalbumin, resp.), were good substrates for I. Substrate analogs in which the O atom of the acetamido group was replaced by S atom were poor substrates.

L11 ANSWER 2 OF 2 MEDLINE on STN
ACCESSION NUMBER: 84279032 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6465897
TITLE: Studies on Turbatrix aceti beta-N-acetylglucosaminidase. 1. Purification and physicochemical characterization.
AUTHOR: Bedi G S; Shah R H; Bahl O P
CONTRACT NUMBER: HD 12581 (NICHD)
R01-HD-08766 (NICHD)
SOURCE: Archives of biochemistry and biophysics, (1984 Aug 15) Vol. 233, No. 1, pp. 237-50.
Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198409
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 7 Sep 1984
AB N-Acetyl-beta-D-glucosaminidase was purified, from the culture medium of the nematode Turbatrix aceti, to homogeneity, as judged by electrophoresis in polyacrylamide gel and ultracentrifugation. The purification scheme involved the following steps: (i) concentration of the culture medium by ultra-filtration by an Amicon PM-30 membrane; (ii) ammonium sulfate precipitation; (iii) DEAE-Sephadex and (iv) Sephadex G-200 chromatography; and (v) affinity chromatography on succinyldiaminopropyl amino-Sepharose bearing the ligand p-aminophenyl 2-acetamido-2-deoxy-1-thio-beta-D-glucopyranoside. The molecular weight of the enzyme was 112,000 +/- 4800 and 124,000 as determined by

polyacrylamide gel electrophoresis and by gel filtration through Sephacryl S-200, respectively. The enzyme showed a pH optimum of 4.8 for N-acetylglucosaminidase and 5.4 for N-acetylgalactosaminidase. The detailed substrate specificity studies were carried out on both synthetic and natural oligosaccharides and glycopeptides. The chitin oligosaccharides and asialo-agalacto complex type as well as high mannose-type glycoproteins such as fetuin and ovalbumin, respectively, were good substrates for the enzyme. Substrate analogs in which the oxygen atom of the acetamido group was replaced by sulfur atom proved to be poor substrates.

L14 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:441581 CAPLUS
DOCUMENT NUMBER: 147:25893
TITLE: Stem bromelain: an enzyme that naturally facilitates oriented immobilization
AUTHOR(S): Khatoon, Hafeeza; Younus, Hina; Saleemuddin, Mohammad
CORPORATE SOURCE: Interdisciplinary Biotechnology Unit, Faculty of Life Sciences, Aligarh Muslim University, Aligarh, 202002, India
SOURCE: Protein & Peptide Letters (2007), 14(3), 233-236
CODEN: PPELEN; ISSN: 0929-8665
PUBLISHER: Bentham Science Publishers Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The lone oligosaccharide chain of stem bromelain was oxidized with periodic acid to generate aldehyde groups and the resulting oxidized enzyme coupled to amino-Sepharose in order to obtain an immobilized preparation with uniformly oriented enzyme. The immobilized bromelain exhibited high proteolytic activity and remarkably enhanced thermal stability as compared to soluble bromelain and that coupled to CNBr activated Sepharose.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:406701 CAPLUS
DOCUMENT NUMBER: 119:6701
TITLE: Use of stable 6-aminohexyl derivatives for labeling polysaccharides with haptens and for preparing polysaccharide immunoadsorbents
AUTHOR(S): Ey, Peter L.
CORPORATE SOURCE: Dep. Microbiol. and Immunol., The Univ. Adelaide, GPO Box 498, Adelaide SA, 5001, Australia
SOURCE: Journal of Immunological Methods (1993), 160(1), 135-7
CODEN: JIMMBG; ISSN: 0022-1759
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A method is described for the preparation and use of 6-aminohexyl substituted polysaccharides. The method involves limited oxidation of the polysaccharide by periodate in the presence of excess 1,6-diaminohexane HCl, which reacts with the dialdehyde product to yield a stable aminohexyl-substituted polysaccharide analogous to 6-aminohexyl-Sepharose. After removal of unattached diaminohexane, the 6-aminohexyl-polysaccharide can be stored indefinitely. Various reagents can be used to label it.

L14 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:182658 CAPLUS
DOCUMENT NUMBER: 104:182658
TITLE: Preparation of high capacity affinity adsorbents using new hydrazino-carriers and their use for low and high performance affinity chromatography of lectins
AUTHOR(S): Ito, Yuki; Yamasaki, Yohsuke; Seno, Nobuko; Matsumoto, Isamu
CORPORATE SOURCE: Fac. Sci., Ochanomizu Univ., Tokyo, 112, Japan
SOURCE: Journal of Biochemistry (Tokyo, Japan) (1986), 99(4), 1267-72
CODEN: JOBIAO; ISSN: 0021-924X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two kinds of carriers with high concns. of hydrazino groups were prepared by simple and convenient procedures. Two hydrazino carriers were obtained on incubation of epoxy-activated carriers with hydrazine hydrate or adipic

acid dihydrazide. Disaccharides were coupled to the hydrazino carriers through reductive amination in the presence of Na cyanoborohydride. The reaction time was much shorter (24 h) than that in the case of the method involving amino-Sepharose 6B (800 h) described by J. Matsumoto et al. (1981). The glycamyl-Sepharose thus obtained showed high adsorption capacities for lectins. Glycamyl-TSK-Gel G300 PW obtained by the same method with TSK-Gel G3000 PW, which is a hydrophobic vinyl polymer matrix for high-performance gel permeation liquid chromatog., could be successfully used for the high-performance liquid affinity chromatog. of lectins. N-Acetylglutamic acid was coupled to hydrazino-Sepharose 4B in the presence of N-ethoxycarbonyl-2-ethoxy-1,2-dihydroquinoline. The adsorbent obtained was used for the affinity chromatog. of Japanese horseshoe crab lectin.

L14 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1981:564863 CAPLUS
DOCUMENT NUMBER: 95:164863
TITLE: Derivatization of epoxy-activated agarose with various carbohydrates for the preparation of stable and high-capacity affinity adsorbents: their use for affinity chromatography of carbohydrate-binding proteins
AUTHOR(S): Matsumoto, Isamu; Kitagaki, Haruko; Akai, Yumiko; Ito, Yuki; Seno, Nobuko
CORPORATE SOURCE: Fac. Sci., Ochanomizu Univ., Tokyo, 112, Japan
SOURCE: Analytical Biochemistry (1981), 116(1), 103-10
CODEN: ANBCA2; ISSN: 0003-2697
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two types of affinity adsorbents for lectins were prepared by new simple procedures. Both types of adsorbents had high ligand concentration and chemical stable linkage between ligand and Sepharose 4B. Oligosaccharide ligands were coupled by reductive amination with NaCNBH3 to amino-Sepharose 4B prepared by amination of epoxy-activated Sepharose 4B. The glycamyl-Sepharose 4B thus obtained had particularly high adsorption capacities for lectins, i.e, lactamyl-Sepharose 4B, 58 mg/mL of gel for peanut lectin, maltamyl-Sepharose 4B, 146 mg/mL for concanavalin A, and tetra-N-acetylchitotetraamyl-Sepharose 4B, 36 mg/mL for wheat germ agglutinin. Hexosamine was coupled by the aid of carbodiimide to carboxyl-Sepharose 4B prepared by succinylation of amino-Sepharose 4B. Galactosamine-Sepharose 4B adsorbed 145 mg soybean agglutinin/mL gel. The columns turned from a semitransparent white to a milky white as they were saturated with lectins.

L14 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1979:504266 CAPLUS
DOCUMENT NUMBER: 91:104266
TITLE: Affinity chromatography of α,α-trehalase: coupling of oligosaccharides to aminohexyl Sepharose
AUTHOR(S): Bergami, Mario; Cacace, Marcello G.
CORPORATE SOURCE: Inst. Gen. Physiol., Univ. Rome, Naples, I-80072, Italy
SOURCE: European Journal of Applied Microbiology and Biotechnology (1979), 7(1), 53-7
CODEN: EJABDD; ISSN: 0171-1741
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Reducing oligosaccharides were covalently linked to the spacer arm of aminohexyl-Sepharose by reductive amination. The reaction was carried out in the presence of NaBH4 in aqueous medium under mild exptl. conditions. An affinity column containing lactose-coupled

Sepharose was used for the purification of α,α-trehalase from Artemia salina embryos. A purification of 185-fold (starting with homogenate) with a yield of 16% of the enzyme was obtained.

L14 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1979:82709 CAPLUS
DOCUMENT NUMBER: 90:82709
TITLE: Direct coupling of reducing oligosaccharides to aminohexyl-sepharose: purification of α,α-trehalase from Artemia salina
AUTHOR(S): Bergami, Mario; Cacace, Marcello G.
CORPORATE SOURCE: Inst. Gen. Physiol., Univ. Rome, Rome, Italy
SOURCE: Affinity Chromatogr., Proc. Int. Symp. (1978), Meeting Date 1977, 111-14. Editor(s): Hoffmann-Ostenhof, O.; Breitenbach, M.; Koller, F. Pergamon: Oxford, Engl. CODEN: 39QEAS
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Reducing oligosaccharides can be covalently linked to the spacer arm of aminohexyl Sepharose by reductive amination. The reaction is carried out in the presence of NaBH4 in aqueous medium and under mild conditions. An affinity column containing lactose-coupled Sepharose was used for the purification of α,α-trehalase from A. salina embryos.

L14 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:403893 CAPLUS
DOCUMENT NUMBER: 85:3893
TITLE: Purification of microbial neutral and alkaline proteases
INVENTOR(S): Nomoto, Masao
PATENT ASSIGNEE(S): Seikagaku Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp. CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 51007178	A	19760121	JP 1974-75376	19740703
PRIORITY APPLN. INFO.:			JP 1974-75376 A	19740703

AB Neutral and alkaline proteases [9001-92-7] in a microbial crude enzyme solution were adsorbed on an insol. high mol. weight polysaccharide coupled to a peptide containing hydrophobic D- or DL-amino acids and eluted with a concentrated salt solution or a denaturing agent solution Thus, 40 ml of triaminoethylsuccinyl triaminoethyl-Sepharose (I) prepared from CNBr-activated Sepharose 4B and triethylene tetramine, succinic acid, and 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (II) was suspended in 40 ml of 40% DMF. To the suspension was added 1.4 g carbobenzoxy-L-phe-D-leu and 1 g of II was added in 5 parts and reacted with stirring at pH 6-8 for 2 days at room temperature to prepare carbobenzoxy-L-phe-D-leu-I. The Sepharose derivative (40 ml) was packed in a column and 40 ml of 10% solution of a com. enzyme preparation from Bacillus subtilis was charged to the column. Neutral protease (.apprx.70 mg) was eluted with 20 mM borate buffer containing 0.5 M NaCl and 10 mM Ca(OAc)2 (pH 9.0) and alkaline protease (.apprx.50 mg) was eluted with 20 mM Tris buffer containing 1 M guanidine-HCl.

L14 ANSWER 8 OF 10 MEDLINE on STN
ACCESSION NUMBER: 2007146612 MEDLINE

DOCUMENT NUMBER: PubMed ID: 17346226
TITLE: Stem bromelain: an enzyme that naturally facilitates oriented immobilization.
AUTHOR: Khatoon Hafeeza; Younus Hina; Saleemuddin Mohammad
CORPORATE SOURCE: Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh 202002, India.
SOURCE: Protein and peptide letters, (2007) Vol. 14, No. 3, pp. 233-6.
Journal code: 9441434. ISSN: 0929-8665.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200706
ENTRY DATE: Entered STN: 10 Mar 2007
Last Updated on STN: 30 Jun 2007
Entered Medline: 29 Jun 2007

AB The lone oligosaccharide chain of stem bromelain was oxidized with periodic acid to generate aldehyde groups and the resulting oxidized enzyme coupled to amino-Sepharose in order to obtain an immobilized preparation with uniformly oriented enzyme. The immobilized bromelain exhibited high proteolytic activity and remarkably enhanced thermal stability as compared to soluble bromelain and that coupled to CNBr activated Sepharose.

L14 ANSWER 9 OF 10 MEDLINE on STN
ACCESSION NUMBER: 86223920 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3711062
TITLE: Preparation of high capacity affinity adsorbents using new hydrazino-carriers and their use for low and high performance affinity chromatography of lectins.
AUTHOR: Ito Y; Yamasaki Y; Seno N; Matsumoto I
SOURCE: Journal of biochemistry, (1986 Apr) Vol. 99, No. 4, pp. 1267-72.
Journal code: 0376600. ISSN: 0021-924X.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198607
ENTRY DATE: Entered STN: 21 Mar 1990
Last Updated on STN: 21 Mar 1990
Entered Medline: 14 Jul 1986

AB Two kinds of carriers with high concentrations of hydrazino groups were prepared by simple and convenient procedures. Hydrazino-carriers (I) and (II) were obtained on incubation of epoxy-activated carriers with hydrazine hydrate and adipic acid dihydrazide, respectively. Disaccharides were coupled to the hydrazino carriers through reductive amination in the presence of sodium cyanoborohydride. The reaction time was much shorter (24 h) than that in the case of the method involving amino-Sepharose 6B (800 h) [Matsumoto, I., Kitagaki, H., Akai, Y., Ito, Y., & Seno, N. (1981) Anal. Biochem. 116, 103-110]. The glycamyl-Sepharose thus obtained showed high adsorption capacities for lectins. Glycamyl-TSKgel G3000 PW obtained by the same method with TSKgel G3000 PW, which is a hydrophobic vinyl polymer matrix for high performance gel permeation liquid chromatography, could be successfully used for the high performance liquid affinity chromatography of lectins. N-Acetylglutamic acid was coupled to hydrazino-Sepharose 4B (I) in the presence of N-ethoxycarbonyl-2-ethoxy-1,2-dihydroquinoline. The adsorbent obtained was used for the affinity chromatography of Japanese horseshoe crab lectin.

L14 ANSWER 10 OF 10 MEDLINE on STN

ACCESSION NUMBER: 82066647 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7305294
TITLE: Preparation of monospecific anti-Salmonella lipopolysaccharide antibodies by affinity chromatography.
AUTHOR: Girard R; Goichot J
SOURCE: Annales d'immunologie, (1981 Mar-Apr) Vol. 132C, No. 2, pp. 211-7.
Journal code: 0353045. ISSN: 0300-4910.
PUB. COUNTRY: France
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198201
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 16 Mar 1990
Entered Medline: 20 Jan 1982
AB The use of immunoadsorbent obtained by coupling aminohexyl-sepharose 4B with Salmonella lipopolysaccharide (LPS) by means of benzoquinone enabled us to obtain anti-O monospecific immune sera which can be used for a quick serological identification of some species of Salmonella in the course of a diagnosis. In this paper we describe a method for binding the LPS extracted from S. typhi-murium with aminohexyl-sepharose 4B, insoluble matrix as well as the preparation of monospecific anti-O5 antibodies from plurispecific anti-S. haifa rabbit immune sera. This separation of anti-O monospecific antibodies by affinity chromatography, avoids the repeated and often tedious adsorption of anti-Salmonella immune sera by the whole corresponding bacteria. Such immunoabsorbents can be used several times without appreciable loss of their affinity properties.

L15 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1977:482947 CAPLUS
DOCUMENT NUMBER: 87:82947
TITLE: Detection by immunofluorescence of common antigenic determinants in unrelated gram-negative bacteria and their lipopolysaccharides
AUTHOR(S): Eskenazi, M.; Konstantinov, G.; Ivanova, R.; Strahilov, D.
CORPORATE SOURCE: Res. Inst. Infect. Parasit. Dis., Sofia, Bulg.
SOURCE: Journal of Infectious Diseases (1977), 135(6), 965-9
CODEN: JIDIAQ; ISSN: 0022-1899
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Various gram-neg. bacteria were subjected to mild acid hydrolysis. The acid-treated bacteria exhibited strong cross-reactivity with fluorescein isothiocyanate conjugated antiserum to the Re mutant of Salmonella minnesota. Hydrolyzed bacteria showed considerably stronger fluorescence than heat-treated bacteria. It is assumed that acid hydrolysis uncovers shared glycolipid determinants that are responsible for cross-reactivity. Isolated homologous and heterologous lipopolysaccharides were allowed to react with antibody to S. minnesota Re insolubilized by covalent binding to aminohexyl Sepharose 4B. The resulting antigen-antibody complexes were visualized by exposure to the fluorescent antiserum. This treatment allows the demonstration o glycolipid structures of intact lipopolysaccharide.

L15 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1977:434899 CAPLUS
DOCUMENT NUMBER: 87:34899
TITLE: Purification of phospholipase C from Bacillus cereus by chromatography on aminoalkyl polysaccharide adsorbents
AUTHOR(S): Gerasimiene, G.; Glemza, A.; Kuliene, V.; Kulis, J.; Makariunaite, J.
CORPORATE SOURCE: All-Union Res. Inst. Appl. Enzymol., Vilnius, USSR
SOURCE: Biokhimiya (Moscow) (1977), 42(5), 919-25
CODEN: BIOHAO; ISSN: 0320-9725
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The purification of phospholipase C from B. cereus by chromatog. on aminoalkylpolysaccharide adsorbents was described. The dependence of the degree of enzyme purification on the amount of ligand and effect of pH and buffer systems on the adsorption-desorption of phospholipase were studied. At pH <9.0, phospholipase C was not retained by the adsorbents; it was purified 4-5-fold and ≤23-fold, when aminoalkyl-Sepharose and hexamethylenediamine-Sephadex were used, resp. With an increase in pH to 10.0, the enzyme was bound by the adsorbent and was eluted with a 40-90% yield of activity and 7-10-fold purification The resulting phospholipase C was highly purified and electrophoretically homogeneous. A mechanism of enzyme-adsorbent interaction was discussed.

L15 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:521830 CAPLUS
DOCUMENT NUMBER: 85:121830
TITLE: Insoluble α-amino acid ester hydrolase preparation
INVENTOR(S): Takahashi, Ken; Yamazaki, Yoshio; Kato, Koichi
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 51061686	A	19760528	JP 1974-136478		19741126
JP 54039473	B	19791128			
DE 2551438	A1	19760812	DE 1975-2551438		19751115
DE 2551438	C2	19860403			
DE 2560532	C2	19881110	DE 1975-2560532		19751115
FR 2292714	A1	19760625	FR 1975-35834		19751124
FR 2292714	B1	19790427			
NL 7513773	A	19760531	NL 1975-13773		19751125
NL 186243	B	19900516			
NL 186243	C	19901016			
GB 1531498	A	19781108	GB 1975-48349		19751125
PRIORITY APPLN. INFO.:			JP 1974-136477	A	19741126
			JP 1974-136478	A	19741126
			JP 1975-127197	A	19751021

AB Microbial α-amino acid ester hydrolase [9013-79-0] was selectively bound to an insol. polysaccharide activated with a cyanogen halide from the crude enzyme preparation Thus, 20 ml of supernatant of the disintegrated and Ca phosphate-treated cells of Xanthomonas species (IFO 13,215) and 20 ml of 0.2 M Tris-buffer (pH 8.0) were added to 1 g of the CNBr-activated Sephadex G-200 [9041-36-5], cellulose [9004-34-6], p-aminobenzylcellulose [9032-51-3], Sepharose 4B [9036-61-7], or PS-1 [9003-35-4] suspended in 40 ml water and the mixture was reacted at 5° for 20 hr. The solid was washed with 100 ml of 0.2 M glycine, 100 ml of 0.5 M NaCl, and 200 ml of water. Binding of the enzyme activity was 31, 14, 18, 67, and 74% for Sephadex G-200, cellulose, p-aminobenzylcellulose, Sepharose 4B, and PS-1, resp.

L15 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:101377 CAPLUS
DOCUMENT NUMBER: 84:101377
TITLE: Biosynthesis of bacterial glycogen. 13. Purification and properties of the Escherichia coli B ADPglucose: 1,4-α-D-glucan 4-α-glucosyltransferase
AUTHOR(S): Fox, Jeffrey; Kawaguchi, Kichitaro; Greenberg, Elaine; Preiss, Jack
CORPORATE SOURCE: Dep. Biochem. Biophys., Univ. California, Davis, CA, USA
SOURCE: Biochemistry (1976), 15(4), 849-57
CODEN: BICHAW; ISSN: 0006-2960
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The E. coli B glycogen synthase (I) was purified to apparent homogeneity with the use of a 4-aminobutyl-Sepharose column. Two fractions of I were obtained: I I with a specific activity of 380 μmole mg-1 and devoid of branching enzyme activity and I II having a specific activity of 505 μmole mg-1 and containing branching enzyme activity which was 0.1% of the activity observed for I. Only 1 protein band was found in disc gel electrophoresis for each I fraction and they were coincident with I activity. One major protein band and 1 very faint protein band which hardly moved into the gel were observed in Na dodecyl sulfate-gel electrophoresis of the I fractions. The subunit mol. weight of the major protein band in Na dodecyl sulfate-polyacrylamide gel electrophoresis of both I fractions was 49,000 ± 2000. The mol. wts. of the native enzymes were determined by sucrose d. gradient ultracentrifugation. I I had a mol. weight of 93,000 while that of I II was 200,000. On standing at 4° or at -85°, both enzymes were transformed into species having mol. wts. of 98,000, 135,000, and 185,000. Thus active forms of the E. coli B I can exist as dimers, trimers, and tetramers of the subunit. I catalyzed transfer of glucose from ADP-glucose to maltose and

higher oligosaccharides of the maltodextrin series but not to glucose. 1,5-Gluconolactone was a potent inhibitor of the I reaction. The reaction was reversible and the formation of labeled ADP-glucose occurred from either [14C]ADP or [14C]glycogen. The ratio of ADP to ADP-glucose at equilibrium at 37° was determined and varied 3-fold at pH 5.27-6.82. From these data, the ratio of ADP2- to ADP-glucose at equilibrium was determined as 45.8 ± 4.5. Assuming that ΔF° of the hydrolysis of the α-1,4-glucosidic linkage is -4.0 kcal, the ΔF° of hydrolysis of the glucosidic linkage in ADP-glucose is -6.3 kcal.

L15 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1975:153523 CAPLUS
DOCUMENT NUMBER: 82:153523
TITLE: Fractionation and characterization of surface antigens from group A Neisseria meningitidis
AUTHOR(S): Cheng, William C.; Webb, Elsie; Vedros, Neyland; Ng, James
CORPORATE SOURCE: Sch. Public Health, Univ. California, Berkeley, CA, USA
SOURCE: Journal of Immunology (1975), 114(5), 1497-505
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Group A meningococcal surface components were 1st subjected to fractionation with a mixture of CHCl3-MeOH. Na dodecyl sulfate-acrylamide gel electrophoresis of the aqueous phase containing 30-40% of the original material revealed only 2 polypeptide components and a slowly migrating carbohydrate component. The soluble fraction of the interphase contained most of the bacterial surface proteins and the CHCl3-MeOH phase essentially all of the lipid components. The components of the aqueous phase were further fractionated by use of the hydrophobic affinity column, 4-phenylbutylamino-Sepharose and gradient elution with NaCl to yield fractions I and II. Fraction II was further separated into a minor and a major component (IIb) with Sephadex G-200. Fraction I contained the group A polysaccharide in ionic linkages with a minor polypeptide component (6%). It elicited bactericidal antibodies in rabbits and protected mice against homologous challenge, whereas the polysaccharide alone was nonimmunogenic in these animals. Fraction IIb was a polysaccharide-polypeptide complex with unknown linkages; it induced a low concentration of rabbit antibodies that were bactericidal to group A and C meningococci. Mice vaccinated with fraction IIb were most resistant to homologous challenge and the resistance was also extended to challenges with group B and C cells.

L15 ANSWER 19 OF 27 MEDLINE on STN
ACCESSION NUMBER: 90282503 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2162155
TITLE: Glycosidases of Ehrlich ascites tumor cells and ascitic fluid--purification and substrate specificity of alpha-N-acetylgalactosaminidase and alpha-galactosidase: comparison with coffee bean alpha-galactosidase.
AUTHOR: Yagi F; Eckhardt A E; Goldstein I J
CORPORATE SOURCE: Department of Biological Chemistry, University of Michigan, Ann Arbor 48109.
CONTRACT NUMBER: CA 20424 (NCI)
SOURCE: Archives of biochemistry and biophysics, (1990 Jul) Vol. 280, No. 1, pp. 61-7.
Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199007
ENTRY DATE: Entered STN: 24 Aug 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 18 Jul 1990

AB Ehrlich ascites tumor cells and ascitic fluid were assayed for glycosidase activity. alpha-Galactosidase and beta-galactosidase, alpha- and beta-mannosidase, alpha-N-acetylgalactosaminidase, and beta-N-acetylglucosaminidase activities were detected using p-nitrophenyl glycosides as substrates. alpha-Galactosidase and alpha-N-acetylgalactosaminidase were isolated from Ehrlich ascites tumor cells on epsilon-aminocaproylgalactosylamine-Sepharose. alpha-Galactosidase was purified 160,000-fold and was free of other glycosidase activities. alpha-N-Acetylgalactosaminidase was also purified 160,000-fold but exhibited a weak alpha-galactosidase activity which appears to be inherent in this enzyme. Substrate specificity of the alpha-galactosidase was investigated with 12 substrates and compared with that of the corresponding coffee bean enzyme. The pH optimum of the Ehrlich cell alpha-galactosidase centered near 4.5, irrespective of substrate, whereas the pH optimum of the coffee bean enzyme for PNP-alpha-Gal was 6.0, which is 1.5 pH units higher than that for other substrates of the coffee bean enzyme. The reverse was found for alpha-N-acetylgalactosaminidase: the pH optimum for the hydrolysis of PNP-alpha-GalNAc was 3.6, lower than the pH 4.5 required for the hydrolysis of GalNAc alpha 1,3Gal. Coffee bean alpha-galactosidase showed a relatively broad substrate specificity, suggesting that it is suited for cleaving many kinds of terminal alpha-galactosyl linkages. On the other hand, the substrate specificity of Ehrlich alpha-galactosidase appears to be quite narrow. This enzyme was highly active toward the terminal alpha-galactosyl linkages of Ehrlich glycoproteins and laminin, both of which possess Gal alpha 1, 3Gal beta 1,4GlcNAc beta-trisaccharide sequences. The alpha-N-acetylgalactosaminidase was found to be active toward the blood group type A disaccharide, and trisaccharide, and glycoproteins with type A-active carbohydrate chains.

L15 ANSWER 20 OF 27 MEDLINE on STN
ACCESSION NUMBER: 85176457 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3986710
TITLE: Purification and chemical characterization of an exopolysaccharide isolated from Capnocytophaga ochracea.
AUTHOR: Dyer J K; Bolton R W
CONTRACT NUMBER: DE 06240-01 (NIDCR)
SOURCE: Canadian journal of microbiology, (1985 Jan) Vol. 31, No. 1, pp. 1-5.
Journal code: 0372707. ISSN: 0008-4166.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198506
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 3 Mar 2000
Entered Medline: 3 Jun 1985

AB Purification and chemical characterization of an immunosuppressive exopolysaccharide from Capnocytophaga ochracea strain 25 are described. This polysaccharide was extracted from spent culture medium by cold ethanol precipitation. Purification was accomplished by trichloroacetic acid and pronase treatments in combination with diethylaminoethyl-Sepharose and concanavalin A-Sepharose chromatography. Purity of the exopolysaccharide was ascertained by polyacrylamide gel electrophoresis using periodic acid--Schiff staining. The exopolysaccharide was free of protein, nucleic

acid, and lipopolysaccharide, but contained large amounts of mannose with lesser quantities of glucose, galactose, glucuronic acid, and glucosamine.

L15 ANSWER 21 OF 27 MEDLINE on STN
ACCESSION NUMBER: 84279032 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6465897
TITLE: Studies on Turbatrix aceti beta-N-acetylglucosaminidase. 1. Purification and physicochemical characterization.
AUTHOR: Bedi G S; Shah R H; Bahl O P
CONTRACT NUMBER: HD 12581 (NICHD)
R01-HD-08766 (NICHD)
SOURCE: Archives of biochemistry and biophysics, (1984 Aug 15) Vol. 233, No. 1, pp. 237-50.
Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198409
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 7 Sep 1984

AB N-Acetyl-beta-D-glucosaminidase was purified, from the culture medium of the nematode Turbatrix aceti, to homogeneity, as judged by electrophoresis in polyacrylamide gel and ultracentrifugation. The purification scheme involved the following steps: (i) concentration of the culture medium by ultra-filtration by an Amicon PM-30 membrane; (ii) ammonium sulfate precipitation; (iii) DEAE-Sephadex and (iv) Sephadex G-200 chromatography; and (v) affinity chromatography on succinyldiaminopropyl amino-Sepharose bearing the ligand p-aminophenyl 2-acetamido-2-deoxy-1-thio-beta-D-glucopyranoside. The molecular weight of the enzyme was 112,000 +/- 4800 and 124,000 as determined by polyacrylamide gel electrophoresis and by gel filtration through Sephacryl S-200, respectively. The enzyme showed a pH optimum of 4.8 for N-acetylglucosaminidase and 5.4 for N-acetylgalactosaminidase. The detailed substrate specificity studies were carried out on both synthetic and natural oligosaccharides and glycopeptides. The chitin oligosaccharides and asialo-agalacto complex type as well as high mannose-type glycoproteins such as fetuin and ovalbumin, respectively, were good substrates for the enzyme. Substrate analogs in which the oxygen atom of the acetamido group was replaced by sulfur atom proved to be poor substrates.

L15 ANSWER 22 OF 27 MEDLINE on STN
ACCESSION NUMBER: 83151307 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6762141
TITLE: [Preparation of immunosorbents from lipopolysaccharides and polysaccharides extracted from various gram-negative and gram-positive bacteria].
Preparation d'immunoabsorbants a partir de lipopolyosides et de polyosides extraits de differentes bacteries a gram negatif et a gram positif.
AUTHOR: Goichot J; Duphot M
SOURCE: Annales d'immunologie, (1982 Nov-Dec) Vol. 133D, No. 3, pp. 327-34.
Journal code: 0353045. ISSN: 0300-4910.
PUB. COUNTRY: France
DOCUMENT TYPE: (ENGLISH ABSTRACT)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: French
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198304

ENTRY DATE: Entered STN: 18 Mar 1990
Last Updated on STN: 18 Mar 1990
Entered Medline: 15 Apr 1983

AB The method of binding of lipopolysaccharides (LPS) extracted from Salmonella typhimurium to aminohexyl-sepharose 4B by activation with benzoquinone was applied to three different LPS extracted from several enterobacteria species: S. seftenberg 1,3,19, S. cholerae suis 6(2),7 and Escherichia coli O141:H32. It was also used for two polysaccharides (PS) extracted from S. seftenberg 1,3,19 and Streptococcus agalactiae type II strain, respectively. Both PS were free from amino groups but exhibited the corresponding antigenic determinants of the cell wall. The use of these immunosorbents enabled us to obtain a monospecific antiserum. They may be a useful tool for serological identification of salmonella and group B streptococci. This method may be applied for other bacterial surface PS. The possible regeneration of such immunosorbents without appreciable loss of their antigen binding capacity makes possible their use for obtaining monospecific antibodies on a preparative scale.

L15 ANSWER 23 OF 27 MEDLINE on STN
ACCESSION NUMBER: 81215394 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7240125
TITLE: Purification of anti-glycosphingolipid antibody and topological localization of glycosphingolipid on the cell surface of rat ascites hepatomas.
AUTHOR: Taki T; Hirabayashi Y; Takagi K; Kamada R; Kojima K; Matsumoto M
SOURCE: Journal of biochemistry, (1981 Feb) Vol. 89, No. 2, pp. 503-10.
Journal code: 0376600. ISSN: 0021-924X.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198108
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 16 Mar 1990
Entered Medline: 20 Aug 1981

AB A simple method for the preparation of oligosaccharide-linked aminohexyl-Sepharose 4B (AH-Sepharose 4B) and its application to the purification of anti-glycosphingolipid antibody which is specific for the oligosaccharide moiety are described. The oligosaccharide, which was obtained from galactosyl(beta 1 leads to 3) N-acetylgalactosaminyl(beta 1 leads to 4)galactosyl(beta 1 leads to 4)glucosylceramide (asialo-GM1) by ozonolysis and subsequent alkali treatment, was covalently linked to the AH-Sepharose 4B by reductamination in the presence of NaBCNH3. Anti-asialo-GM1 antibody was purified by means of an affinity technique with the oligosaccharide-linked AH-Sepharose 4B. The antibody bound to the affinity adsorbent was eluted with 0.5 M NaSCN and 3.0 M NaSCN. Antibody with higher specific activity was recovered in the 3.0 M NaSCN fraction with 50% recovery of the activity of the starting material. The purified antibody was found to be quite specific for asialo-GM1. The presence of asialo-GM1 on the cell surface of free-type rat ascites hepatomas was confirmed by the immunofluorescence technique. The cell aggregates induced by the purified antibody were observed under a scanning electron microscope. The cell connection was found to occur at the tips of microvilli of the surface membrane. The localization of asialo-GM1 on the tips of the surface membrane was confirmed by means of the ferritin-conjugated antibody technique.

L15 ANSWER 24 OF 27 MEDLINE on STN
ACCESSION NUMBER: 77242671 MEDLINE
DOCUMENT NUMBER: PubMed ID: 19100

TITLE: [Purification of phospholipase C from Bacillus cereus by chromatography on aminoalkylpolysaccharide adsorbents]. Khromatograficheskaia ochistka fosfolipazy s iz Bacillus cereus na aminoalkilpolisakharidnykh sorbentakh.
AUTHOR: Gerasimene G B; Glemzha A A; Kulene V V; Kulis Iu Iu; Makariunaite Iu P
SOURCE: Biokhimii a (Moscow, Russia), (1977 May) Vol. 42, No. 5, pp. 919-25.
Journal code: 0372667. ISSN: 0320-9725.
PUB. COUNTRY: USSR
DOCUMENT TYPE: (ENGLISH ABSTRACT)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Russian
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197710
ENTRY DATE: Entered STN: 14 Mar 1990
Last Updated on STN: 6 Feb 1995
Entered Medline: 14 Oct 1977

AB Purification of phospholipase C from Bac. cereus by chromatography on aminoalkylpolysaccharide adsorbents is described. The dependence of the degree of enzyme purification on the amount of ligant and effect of pH and buffer systems on the adsorption-desorption of phospholipase have been studied. At a pH below 9.0 phospholipase C is not retained by the adsorbents and is purified 4-5-fold and up to 23-fold, when aminoalkyl-Sepharose and hexamethylenediamine Sephadex are used respectively. With an increase in the pH value up to 10.0, the enzyme is bound by the adsorbent and is eluted with a 40-90% yield of activity and 7-10-fold purification. The resulting phospholipase C is highly purified and electrophoretically homogeneous. A mechanism of the enzyme-adsorbent interaction is discussed.

L15 ANSWER 25 OF 27 MEDLINE on STN
ACCESSION NUMBER: 77189208 MEDLINE
DOCUMENT NUMBER: PubMed ID: 68087
TITLE: Detection by immunofluorescence of common antigenic determinants in unrelated gram-negative bacteria and their lipopolysaccharides.
AUTHOR: Eskenazy M; Konstantinov G; Ivanova R; Strahilov D
SOURCE: The Journal of infectious diseases, (1977 Jun) Vol. 135, No. 6, pp. 965-9.
Journal code: 0413675. ISSN: 0022-1899.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 197707
ENTRY DATE: Entered STN: 14 Mar 1990
Last Updated on STN: 14 Mar 1990
Entered Medline: 29 Jul 1977

AB Various gram-negative bacteria were subjected to mild acid hydrolysis. The acid-treated bacteria exhibited strong cross-reactivity with fluorescein isothiocyanate-conjugated antiserum to the Re mutant of Salmonella minnesota. Hydrolyzed bacteria showed considerably stronger fluorescence than heat-treated bacteria. It is assumed that acid hydrolysis uncovers shared glycolipid determinants that are responsible for cross-reactivity. Isolated homologous and heterologous lipopolysaccharides were allowed to react with antibody to S. minnesota Re insolublized by covalent binding to aminohexyl Sepharose 4B. The resulting antigen-antibody complexes were visualized by exposure to the fluorescent antiserum. This treatment allows the demonstration of glycolipid structures of intact lipopolysaccharides.

L15 ANSWER 26 OF 27 MEDLINE on STN

ACCESSION NUMBER: 76114836 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2288
TITLE: Biosynthesis of bacterial glycogen. Purification and properties of the Escherichia coli B ADPglucose:1,4-alpha-D-glucan 4-alpha-glucosyltransferase.
AUTHOR: Fox J; Kawaguchi K; Greenberg E; Preiss J
SOURCE: Biochemistry, (1976 Feb 24) Vol. 15, No. 4, pp. 849-57.
Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197604
ENTRY DATE: Entered STN: 13 Mar 1990
Last Updated on STN: 6 Feb 1998
Entered Medline: 29 Apr 1976

AB The Escherichia coli B glycogen synthase has been purified to apparent homogeneity with the use of a 4-aminobutyl-Sepharose column. Two fractions of the enzyme were obtained: glycogen synthase I with a specific activity of 380 mumol mg-1 and devoid of branching enzyme activity and glycogen synthase II having a specific activity of 505 mumol mg-1 and containing branching enzyme activity which was 0.1% of the activity observed for the glycogen synthase. Only one protein band was found in disc gel electrophoresis for each glycogen synthase fraction and they were coincident with glycogen synthase activity. One major protein band and one very faint protein band which hardly moved into the gel were observed in sodium dodecyl sulfate gel electrophoresis of the glycogen synthase fractions. The subunit molecular weight of the major protein band in sodium dodecyl sulfate gel electrophoresis of both glycogen synthase fractions was determined to be 49 000 +/- 2 000. The molecular weights of the native enzymes were determined by sucrose density gradient ultracentrifugation. Glycogen synthase I had a molecular weight of 93 000 while glycogen synthase II had a molecular weight of 200 000. On standing at 4 degrees C or at -85 degrees C both enzymes transform into species having molecular weights of 98 000, 135 000, and 185 000. Thus active forms of the E. coli B glycogen synthase can exist as dimers, trimers, and tetramers of the subunit. The enzyme was shown to catalyze transfer of glucose from ADPglucose to maltose and to higher oligosaccharides of the maltodextrin series but not to glucose. 1,5-Gluconolactone was shown to be a potent inhibitor of the glycogen synthase reaction. The glycogen synthase reaction was shown to be reversible. Formation of labeled ADPglucose occurred from either [14C]ADP or [14C]glycogen. The ratio of ADP to ADPglucose at equilibrium at 37 degrees C was determined and was found to vary threefold in the pH range of 5.27-6.82. From these data the ratio of ADP2- to ADPglucose at equilibrium was determined to be 45.8 +/- 4.5. Assuming that deltaF degrees of the hydrolysis of the alpha-1,4-glucosidic linkage is -4.0 kcal the deltaF degrees of hydrolysis of the glucosidic linkage in ADPglucose is -6.3 kcal.

L15 ANSWER 27 OF 27 MEDLINE on STN
ACCESSION NUMBER: 75134385 MEDLINE
DOCUMENT NUMBER: PubMed ID: 804516
TITLE: Fractionation and characterization of surface antigens from group A Neisseria meningitidis.
AUTHOR: Cheng W C; Webb E; Vedros N; Ng J
SOURCE: Journal of immunology (Baltimore, Md. : 1950), (1975 May) Vol. 114, No. 5, pp. 1497-505.
Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals

ENTRY MONTH: 197507
ENTRY DATE: Entered STN: 10 Mar 1990
Last Updated on STN: 10 Mar 1990
Entered Medline: 1 Jul 1975

AB Group A meningococcal surface components were first subjected to fractionation with a mixture of chloroform-methanol. Sodium dodecyl sulfate-acrylamide gel electrophoresis of the aqueous phase containing 30 to 40% of the original material revealed only two polypeptide components and a slowly migrating carbohydrate component. The soluble fraction of the interphase was found to contain most of the bacterial surface proteins and the chloroform-methanol phase essentially all of the lipid components. The components of the aqueous phase were further fractionated by use of the hydrophobic affinity column, 4-phenylbutylamino-Sepharose and gradient elution with NaCl to yield fractions I and II. Fraction II was further separated into a minor and a major component (IIb) with Sepharose G-200. Fraction I contained the group A polysaccharide in ionic linkages with a minor polypeptide component (6%). It elicited bactericidal antibodies in rabbits and protected mice against homologous challenge, whereas the polysaccharide alone was non-immunogenic in these animals. Fraction IIb was a polysaccharide-polypeptide complex with unknown linkages; it induced a low concentration of rabbit antibodies that were bactericidal to group A and C meningococci. Mice vaccinated with fraction IIb were most resistant to homologous challenge and the resistance was also extended to challenges with group B and C cells. Fractions I and IIb appeared to be useful alternatives to the currently employed group-specific polysaccharide vaccines for the protection against drug-resistant meningococci. A simplified procedure for the preparation of group-specific polysaccharide was presented.

L15 ANSWER 1 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:742790 CAPLUS
TITLE: Method for purifying fructosyl transferase capable of selectively producing neo-fructo oligosaccharide from penicillium citrinum kccm 11663
INVENTOR(S): Kim, Seung Wook; Lim, Jung Soo; Lee, Dong Hwan
PATENT ASSIGNEE(S): Korea University Industry and Academy Cooperation Foundation, S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2007006210	A	20070111	KR 2005-61337	20050707

PRIORITY APPLN. INFO.: KR 2005-61337 20050707

AB A method for purifying fructosyl transferase from Penicillium citrinum KCCM 11663 is provided to obtain the fructosyl transferase capable of selectively producing neo-fructo oligosaccharide without producing fructo-oligosaccharide. The method comprises the steps of: (a) preculturing Penicillium citrinum KCCM 11663 in a culture medium containing sucrose at a temperature of 15-35 deg.C with the speed of 100-30 rpm for 60-90 h; (b) performing a shake-culturing of the preculture obtained from the step(a) in the same culture medium as the step(a) at a temperature of 15-35 deg.C with the speed of 400-700 rpm for 80-120 h to mass-produce fructosyl transferase; (c) centrifuging the fermented solution of the step(b) to remove fungus bodies therefrom and the precipitating protein from the remaining solution by using ammonium sulfate to concentrate the protein; (d) after performing a first chromatog. on the concentrated protein through a diethylaminoethyl-sepharose(DEAE-sepharose) column, eluting the protein using a salt having the concentration of 0.05-0.2M; (e) after performing a second chromatog. on the eluted protein through a carboxymethyl-sepharose(CM-sepharose) column, eluting the protein using a salt having the concentration of 0.05-0.2M; and (f) performing a third chromatog. on the eluted protein from the step(e) through a sephadex G75 column to purify the fructosyl transferase. In the method, the fructosyl transferase selectively produces neo-fructo oligosaccharide such as neokestose and neo-nystose from the sucrose.

L15 ANSWER 2 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1990:511326 CAPLUS
DOCUMENT NUMBER: 113:111326
TITLE: Glycosidases of Ehrlich ascites tumor cells and ascitic fluid - purification and substrate specificity of α-N-acetylgalactosaminidase and α-galactosidase: comparison with coffee bean α-galactosidase
AUTHOR(S): Yagi, Fumio; Eckhardt, Allen E.; Goldstein, Irwin J.
CORPORATE SOURCE: Dep. Biol. Chem., Univ. Michigan, Ann Arbor, MI, 48109, USA
SOURCE: Archives of Biochemistry and Biophysics (1990), 280(1), 61-7
CODEN: ABBIA4; ISSN: 0003-9861
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Ehrlich ascites tumor cells and ascites fluid were assayed for glycosidase

activity. α-Galactosidase (I) and β-galactosidase, α- and β-mannosidase, and α-N-acetylgalactosaminidase (II) and β-N-acetylglucosaminidase activities were detected using 4-p-nitrophenyl (PNP) glycosides as substrates. I and II were isolated from Ehrlich ascites tumor cells on ε-aminocaproylgalactosylamine-Sepharose. I was purified 160,000-fold and was free of other glycosidase activities. II was also purified 160,000-fold but exhibited a weak I activity which appeared to be inherent in this enzyme. The substrate specificity of I was investigated with 12 substrates and compared with that of the corresponding coffee bean enzyme. The pH optimum of Ehrlich cell I centered near 4.5, irresp. of substrate, whereas the pH optimum of the coffee bean enzyme for PNP-α-Gal was 6.0, which was 1.5 pH units higher than that for other substrates of the coffee bean enzyme. The reverse was found for II: the pH optimum for the hydrolysis of PNP-α-GalNAc was 3.6, lower than the pH 4.5 required for the hydrolysis of GalNAcα1,3Gal. Coffee bean I showed a relatively broad substrate specificity, suggesting that it is suited for cleaving many kinds of terminal α-galactosyl linkages. On the other hand, the substrate specificity of Ehrlich I appeared to be quite narrow. This enzyme was highly active toward the terminal α-galactosyl linkages of Ehrlich glycoproteins and laminin, both of which possess Galα1, 3Galβ1,4,GlcNAcβ- trisaccharide sequences. II was found to be active toward the blood group type A disaccharide and trisaccharide, and glycoproteins with type A-active carbohydrate chains.

L15 ANSWER 3 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1989:387 CAPLUS
DOCUMENT NUMBER: 110:387
TITLE: Studies on an antitumor polysaccharide RBS derived from rice bran. II. Preparation and general properties of RON, an active fraction of RBS
AUTHOR(S): Takeo, Suguru; Kado, Hisao; Yamamoto, Hisao; Kamimura, Minoru; Watanabe, Nobuhiro; Uchida, Kiichi; Mori, Yoshitada
CORPORATE SOURCE: Res. Dev. Lab., Sapporo Brew. Ltd., Yaizu, 425, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1988), 36(9), 3609-13
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An antitumor polysaccharide RON was obtained by fractionating RBS (a saccharide derived from rice bran) as the non-adsorbed fraction on diethylaminoethyl-Sepharose CL-6B. RON is a dextran-like α-glucan composed mainly of α-1,6-glucosidic linkages with a small amount of C-3 branches. Methylation anal. showed that the molar ratio of non-reducing terminal:1,6-linkage:1,6,6-linkage was 1:25:1.2. Its mol. weight is over 1000 kilodaltons (kDa), the sp. rotation is [α]D20 + 205°, it contains almost no protein and no starch, and it contains a small amount of inorg. substances. RON has potent antitumor activities against syngeneic tumors, Meth-A fibrosarcoma and Lewis lung carcinoma not only by i.p. administration by also by oral administration, having optimum doses around 30 mg/kg. It is rare that an α-glucan such as RON has potent antitumor activities. Therefore, RON could be an interesting material to elucidate the relationship between the structure and antitumor activities of polysaccharides.

L15 ANSWER 4 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1987:489397 CAPLUS
DOCUMENT NUMBER: 107:89397
TITLE: The chemical structure of an antitumor polysaccharide in mycelia of Cochliobolus miyabeanus
AUTHOR(S): Nanba, Hiroaki; Kuroda, Hisatora
CORPORATE SOURCE: Lab. Microbiol., Kobe Women's Coll. Pharm., Kobe, 658,

Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1987), 35(3), 1285-8
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The chemical structure and antitumor activities of a polysaccharide form mycelia of C. miyabeanus (Ascomycetes) were examined The polysaccharide extracted with 4N HOAc was purified by Sepharose CL-4B and diethylaminoethyl-Sepharose column chromatog.; 0.3 g of this antitumor glucan was obtained from 100 g of dried mycelia. The purified polysaccharide contains 99.1% sugar (I) and 0.9% protein and its mol. weight was approx. 1.2 + 106. The chemical structure of the polysaccharide was determined by methylation, Smith degradation and 13C-NMR analyses and the structure was shown to have a 1,3-linked main chain with branches from the 6 position of some glucose residues. The polysaccharide (0.5 mg/kg/day) caused tumor growth inhibition in the allogeneic system of ICR mice-Sarcoma 180 tumor (50% inhibition ratio) when given by i.p. injection.

L15 ANSWER 5 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1985:442631 CAPLUS
DOCUMENT NUMBER: 103:42631
TITLE: Purification of antithrombin III from blood plasma
PATENT ASSIGNEE(S): Japanese Red Cross Society, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60048930	A	19850316	JP 1983-153188	19830824

PRIORITY APPLN. INFO.: JP 1983-153188 19830824
AB Specific binding sites (for antithrombin [9000-94-6] III) isolated from sulfated polysaccharides (such as heparin [9005-49-6]) are treated with hydrophilic gel carriers to produce a preparation for use in purification of antithrombin III by affinity chromatog. Thus, Na heparin in 10% MeOH was acetylated, treated with heparinase, and the reaction mixture was adsorbed on CNBr-activated antithrombin III-containing Sepharose 4B, which was eluted with phosphate buffer (50 mM, pH 7.3) containing 0.3M NaCl and then with the same phosphate buffer containing 2M NaCl to give a fraction containing heparin oligomers. The oligomers were bound to aminohexyl Sepharose 4B [58856-73-8] to give a carrier for use in purification of antithrombin III. A 10-mL human plasma was passed through a column containing the prepared gel by using 50 mM phosphate buffer (pH 7.3) containing 0.3M NaCl and 50 mM phosphate buffer (pH 7.3) containing 2M NaCl as eluents. The active fraction contained 4.26 unit antithrombin III/mg protein. A 213-fold purification was obtained.

L15 ANSWER 6 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1985:162539 CAPLUS
DOCUMENT NUMBER: 102:162539
TITLE: Purification and chemical characterization of an exopolysaccharide isolated from Capnocytophaga ochracea
AUTHOR(S): Dyer, J. K.; Bolton, R. W.
CORPORATE SOURCE: Med. Cent., Univ. Nebraska, Lincoln, NE, 68583-0740, USA
SOURCE: Canadian Journal of Microbiology (1985), 31(1), 1-5
CODEN: CJMIAZ; ISSN: 0008-4166

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Purification and chemical characterization of an immunosuppressive exopolysaccharide from C. ochracea strain 25 are described. This polysaccharide was extracted from spent culture medium by cold EtOH precipitation Purification was accomplished by trichloroacetic acid and Pronase treatments in combination with diethylaminoethyl-Sepharose and concanavalin A-Sepharose chromatog. Purity of the exopolysaccharide was ascertained by polyacrylamide gel electrophoresis using periodic acid-Schiff staining. The exopolysaccharide was free of protein, nucleic acid, and lipopolysaccharide but contained large amts. of mannose with lesser quantities of glucose, galactose, glucuronic acid, and glucosamine.

L15 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:506252 CAPLUS
DOCUMENT NUMBER: 101:106252
TITLE: Studies on Turbatrix aceti β-N-acetylglucosaminidase: 1. Purification and physicochemical characterization
AUTHOR(S): Bedi, Gurrinder S.; Shah, Ramesh H.; Bahl, Om P.
CORPORATE SOURCE: Dep. Biol. Sci., State Univ. New York, Buffalo, NY, 14260, USA
SOURCE: Archives of Biochemistry and Biophysics (1984), 233(1), 237-50
CODEN: ABBIA4; ISSN: 0003-9861
DOCUMENT TYPE: Journal
LANGUAGE: English
AB N-Acetyl-β-D-glucosaminidase (I) was purified, from the culture medium of the nematode T. aceti, to homogeneity, as judged by electrophoresis in polyacrylamide gel and ultracentrifugation. The purification scheme involved concentration of the culture medium by ultrafiltration by an Amicon PM-30 membrane, precipitation, DEAE-Sephadex and Sephadex G-200 chromatog., and affinity chromatog. on succinyldiaminopropyl amino -Sepharose bearing the ligand p-aminophenyl 2-acetamido-2-deoxy-1-thio-β-D-glucopyranoside. The mol. weight of the enzyme was 112,000 and 124,000, as determined by polyacrylamide gel electrophoresis and by gel filtration through Sephacryl S-200, resp. The enzyme showed a pH optimum of 4.8 for I activity and 5.4 for N-acetylgalactosaminidase. The detailed substrate specificity studies were carried out on both synthetic and natural oligosaccharides and glycopeptides. The chitin oligosaccharides and asialo-agalacto complex-type glycoproteins, as well as high-mannose-type glycoproteins (such as fetuin and ovalbumin, resp.), were good substrates for I. Substrate analogs in which the O atom of the acetamido group was replaced by S atom were poor substrates.

L15 ANSWER 8 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:476714 CAPLUS
DOCUMENT NUMBER: 99:76714
TITLE: Characteristics of immobilized histamine for pyrogen adsorption
AUTHOR(S): Minobe, Satoshi; Sato, Tadashi; Tosa, Tetsuya; Chibata, Ichiro
CORPORATE SOURCE: Dep. Biochem., Tanabe Seiyaku Co. Ltd., Osaka, Japan
SOURCE: Journal of Chromatography (1983), 262, 193-8
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Aminohexyl-Sepharose CL-4B-immobilized histamine had a high affinity for pyrogen (Escherichia coli O128:B12 lipopolysaccharide) at low ionic strength, at neutral pH, at high temperature, and at low flow-rates of a solution containing pyrogen. The absorption

capacity was 0.9 mg/mL. Immobilized histamine could be completely regenerated by washing with 0.2M NaOH containing 10-30% EtOH followed by 1.5 M NaCl, or 0.2M NaOH followed by 0.5% Na deoxycholate, 0.2M NaOH, and 1.5M NaCl.

L15 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1982:32978 CAPLUS
DOCUMENT NUMBER: 96:32978
TITLE: Preparation of monospecific anti-Salmonella lipopolysaccharide antibodies by affinity chromatography
AUTHOR(S): Girard, R.; Goichot, J.
CORPORATE SOURCE: Serv. Immunophysiol. Mol., Inst. Pasteur, Paris, 75724/15, Fr.
SOURCE: Annales d'Immunologie (Paris) (1981), 132C(2), 211-17
CODEN: ANIMCZ; ISSN: 0300-4910
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A lipopolysaccharide bearing O antigenic 4,12 determinants was separated from S. typhimurium and conjugated with aminohexyl Sepharose 4 B using benzoquinone as a linking group. This material was used in an affinity column to obtain monospecific anti-O5 antibodies from rabbit immune serum to S. haifa. The column contained 45-55% lipopolysaccharide. The ratio of μmol of antibody bound to μmol of lipopolysaccharide was approx. 20. The immunoadsorbent was used 3 times without alteration of its properties toward the anti-O5 serum.

L15 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1981:154604 CAPLUS
DOCUMENT NUMBER: 94:154604
TITLE: Purification of anti-glycosphingolipid antibody and topological localization of glycosphingolipid on the cell surface of rat ascites hepatomas
AUTHOR(S): Taki, Takao; Hirabayashi, Yoshio; Takagi, Kuniaki; Kamada, Ryoei; Kojima, Kiyohide; Matsumoto, Makoto
CORPORATE SOURCE: Dep. Biochem., Shizuoka Coll. Pharm., Shizuoka, 422, Japan
SOURCE: Journal of Biochemistry (Tokyo, Japan) (1981), 89(2), 503-10
CODEN: JOBIAO; ISSN: 0021-924X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A simple method for the preparation of oligosaccharide-linked aminohexyl-Sepharose 4B (AH-Sepharose 4B) and its application to the purification of antiglycosphingolipid antibody which is specific for the oligosaccharide moiety are described. The oligosaccharide, which was obtained from galactosyl(β1→3)N-acetylgalactosaminyl(β1 → 4) galactosyl(β1 → 4)glucosylceramide (asialo-GM1) by ozonolysis and subsequent alkali treatment, was covalently linked to the AH-Sepharose 4B by reductamination in the presence of NaBCNH. Anti-asialo-GM1 antibody was purified by an affinity technique with the oligosaccharide -linked AH-Sepharose 4B. The antibody bound to the affinity adsorbent was eluted with 0.5M NaSCN and 3.0M NaSCN. Antibody with higher specific activity was recovered in the 3.0M NaSCN fraction with 50% recovery of the activity of the starting material. The purified antibody was quite specific for asialo-GM1. The presence of asialo-GM1 on the cell surface of free-type rat ascites hepatomas was confirmed by the immunofluorescence technique. The cell aggregates induced by the purified antibody were observed under a scanning electron microscope, and the cell connection occurred at the tips of microvilli of the surface membrane. The localization of asialo-GM1 on the tips of the surface membrane was confirmed by means of the ferritin-conjugated antibody technique.

L15 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1980:582012 CAPLUS
DOCUMENT NUMBER: 93:182012
TITLE: Purification of urokinase
PATENT ASSIGNEE(S): Nisshin Flour Milling Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55092687	A	19800714	JP 1978-165798	19781228
JP 62015196	B	19870406		

PRIORITY APPLN. INFO.: JP 1978-165798 A 19781228

AB Crude urokinase (I) solution is treated with granular ion exchange polysaccharide and then adsorbed on polysaccharide granules attached to a synthetic inhibitor of I through a C-chain followed by elution of I. Thus, 30 mg crude I (900 units/mg) was dialyzed against 0.2M Tris-HCl buffer (pH 7.5) and the dialyzate was charged to a column of DEAE-cellulose buffered with the same buffer. The eluate was dialyzed against 0.1M phosphate buffer (pH 7.0) containing 0.4M NaCl and charged to a column of p-aminobenzamidine-Sepharose 4B buffered with the phosphate buffer. The I adsorbed was eluted with 0.1M acetate buffer (pH 4.0) containing 1M NaCl. The eluate was dialyzed against water and lyophilized to yield 2 mg I with a sp. activity of 16 + 104 units/mg.

L15 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1979:117338 CAPLUS
DOCUMENT NUMBER: 90:117338
TITLE: Isolation and purification of biopolymers by affinity chromatography. I. New highly effective biospecific adsorbents for affinity chromatography of polyadenylated mRNA
AUTHOR(S): Klyashchitskii, B. A.; Koroleva, G. E.; Mitina, V. Kh.; Alekhina, R. P.; Zborovskaya, I. B.; Likhtenshtein, A. V.
CORPORATE SOURCE: Inst. Biol. Med. Chem., Moscow, USSR
SOURCE: Bioorganicheskaya Khimiya (1979), 5(1), 92-9
CODEN: BIKHD7; ISSN: 0132-3423
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB New highly effective biospecific adsorbents for affinity chromatog. of poly(A)-containing RNA were prepared: poly(U)-aminoethylcarbamoyldextran -Sepharose (adsorbent A) and poly(U)-glycogen-hydrazidosuccinyl-Sepharose (adsorbent B). The poly(U) contents were 1.47 and 1.45 mg/mL, and poly(A) binding capacities were 1.44 and 1.48 mg/mL for adsorbents A and B, resp. Chromatog. studies of poly(A) and poly(U) by using both adsorbents demonstrated the electrostatic nature of nonspecific polynucleotide-adsorbent binding. Isolation of poly(A)-containing mRNA from mouse liver cells was performed on adsorbent B, which is the 1st example of application of biospecific adsorbents with polysaccharide spacers for affinity chromatog. Optimal conditions for poly(A)-mRNA affinity chromatog., aimed at obtaining the biopolymer in a quant. yield, are discussed.

L15 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1978:165898 CAPLUS
DOCUMENT NUMBER: 88:165898
TITLE: Acetate kinase chromatography on agarose derivatives

AUTHOR(S): Karpaviciene, D.; Kuliene, V.; Kulys, J.; Glemza, A.
CORPORATE SOURCE: All-Union Res. Inst. Appl. Enzymol., Vilnius, USSR
SOURCE: Biokhimiya (Moscow) (1978), 43(3), 446-52
CODEN: BIOHAO; ISSN: 0006-307X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Acetate kinase from Escherichia coli K-12 was studied chromatog. on ω-aminoalkyl polysaccharide sorbents. The dependence of protein sorption-desorption on ionic strength and the effect of pH on acetate kinase sorption were studied. Increases in ionic strength caused a decrease in the amount of protein sorbed on hexamethylenediamine- and chlorotriazinehexamethylenediamine-Sepharose. On hexamethylenediamine-, octamethylenediamine- and dimethylhexamethylenediamine-agarose, acetate kinase was adsorbed in the pH range 6.5-9.0, whereas on chlorotriazinehexamethylenediamine-Sepharose, at it was adsorbed in the pH range 6.5-8.0. The active protein was eluted at ionic strengths of 0.14-0.17M. Acetate kinase was not adsorbed on carboxypropionylaminohexyl-Sepharose within the pH range studied, i.e. 5.0-9.0, and was not adsorbed on hexamethylenediamine-agarose at pH 4.0 or on chlorotriazinehexamethylenediamine-Sepharose at pH 9.0. The mechanism of enzyme-adsorbent interaction is discussed.

L17 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:466106 CAPLUS
DOCUMENT NUMBER: 122:285305
TITLE: Expression of Blood Group Lewis b Determinant from Lewis a: Association of this Novel α(1,2)-L-Fucosylating Activity with the Lewis Type α(1,3/4)-L-Fucosyltransferase
AUTHOR(S): Chandrasekaran, E. V.; Jain, Rakesh K.; Rhodes, John M.; Srnka, Cheryl A.; Larsen, Robert D.; Matta, Khushi L.
CORPORATE SOURCE: Department of Gynecologic Oncology, Roswell Park Cancer Institute, Buffalo, NY, 14263, USA
SOURCE: Biochemistry (1995), 34(14), 4748-56
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Blood group H type 1 [Fucα(1,2)Galβ(1,3)GlcNAcβ→] is known as the precursor structure of the blood group determinant, Lewis b [Fucα(1,2)Galβ(1,3)(Fucα(1,4))GlcNAcβ→]. Recently, a new biosynthetic route for Lewis b from Lewis a [Galβ(1,3)(Fucα(1,4))GlcNAc→] was identified in human gastric carcinoma cells, colon carcinoma Colo 205, and ovarian tumor. The present study demonstrates the association of this new type of α(1,2)-L-fucosyltransferase (FT) activity with the Lewis-type α(1,3/4)-L-FT as follows: (i) the α(1,4)- and novel α(1,2)-FT activities of Colo 205 were much less inhibited than the α(1,3)-FT activity by N-ethylmaleimide [Ki (μM) = 714.0, 119.0, and 6.5 resp.]. (Ii) The α(1,4)- and novel α(1,2)-FT activities emerged from a Sephacryl S-200 column in identical positions. (Iii) A specific inhibitor (copolymer from 3-sulfo-Galβ(1,3)GlcNAcβ-O-allyl and acrylamide) of α(1,4)-FT activity inhibited both α(1,4)- and α(1,2)-FT activities in Sephacryl S-200 column effluent to almost the same extent (.apprx.80%); (iv) separation of the Lewis-type α(1,3/4)-FT from the plasma-type α(1,3)-FT by specific elution of the affinity column (bovine IgG glycopep-Sepharose) with lactose and further purification on a Sephacryl S-100 HR column showed that (a) the α(1,3)-FT activity was the inherent capacity of the Lewis-type FT (Colo 205 fraction L) since .apprx.90% of both the α(1,4)- and α(1,3)-FT activities is inhibited by the copolymer, (b) the unique ability of catalyzing the α(1,2)-L-fucosylation of Gal in Lewis a structure and also the α(1,3)-L-fucosylation of Glc in lactose-based structure belonged to the Lewis-type enzyme (Colo 205 fraction L), (c) a measurement of the [14C]fucosyl products arising from the two acceptors Galβ(1,3)(4,6-di-O-Me)GlcNAcβ-O-Bn and 3-sulfo-Galβ(1,3)GlcNAcβ-O-A1 (specific for α(1,2) and α(1,4), resp.) taken in the same incubation mixture showed mutual inhibition by the acceptors [Km for the α(1,4)-specific acceptor, 3-sulfo-Galβ(1,3)GlcNAcβ-O-A1, increased from 32 to 50 μM in the presence of 7.5 mM Galβ(1,3)(4,6-di-O-Me)GlcNAcβ-O-Bn, whereas Ki for the mutual inhibition of α(1,2)-FT activity by the former was 102 μM], and (d) the Lewis-type FT, in contrast to the plasma-type FT, was highly effective in fucosylating com. (Iv) A cloned FT (FT III:Lewis type) and the Colo 205 Lewis-type FT (fraction L) showed similar activities toward various acceptors; the enzymic product resulting from the action of cloned FT on Galβ(1,3)(Fucα(1,4))GlcNAc-β-O-Bn was identified by FAB mass spectrometry as the difucosyl compound (V) An examination of six human cell lines indicated that the novel α(1,2)-FT activity assocs. with the α(1,4)-FT activity.

L17 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:229704 CAPLUS
DOCUMENT NUMBER: 110:229704
TITLE: Novel polyfucosylated N-linked glycopeptides with blood group A, H, X, and Y determinants from human small intestinal epithelial cells
AUTHOR(S): Finne, Jukka; Breimer, Michael E.; Hansson, Gunnar C.; Karlsson, Karl Anders; Leffler, Hakon; Vliegenthart, Johannes F. G.; Van Halbeek, Herman
CORPORATE SOURCE: Dep. Med. Biochem., Univ. Turku, Turku, SF-20520, Finland
SOURCE: Journal of Biological Chemistry (1989), 264(10), 5720-35
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A novel type of N-linked glycopeptides representing a major part of the glycans in human small intestinal epithelial cells from blood group A and O individuals were isolated by gel filtrations and affinity chromatog. on Con A-Sepharose and Bandeiraea simplicifolia lectin I-Sepharose. Sugar composition, methylation anal., 1H NMR spectroscopy of the underivatized glycopeptides and FAB-mass spectrometry and electron impact-mass spectrometry of the permethylated glycopeptides indicated a tri- and tetra-antennary structure containing an intersecting N-acetylglucosamine and an α(1 → 6)-linked fucose residue in the core unit for the majority of the glycans. In contrast to most glycopeptides of other sources, the intestinal glycopeptides were devoid of sialic acid, but contained 6-7 residues of fucose. The outer branches contained the following structures: Fucα-2Galβ1-3GlcNAcβ1- (H type 1); Fucα1-2Galβ1-4GlcNAcβ1- (H type 2); Galβ1-4(Fucα1-3)GlcNAcβ1- (X); Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1- (Y); GalNAcα1-3(4Fucα1-2)Galβ1-3GlcNAcβ1- (A type 1); GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1- (monofucosyl A type 2); GalNAcα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ1- (difucosyl A type 2); and GalNAcα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα12-3)GlcNAcβ1- (trifucosyl A type 2). The blood group determinant structures were mainly of type 2, whereas glycolipids from the same cells contained mainly type 1 determinants. The polyfucosylated glycans represent a novel type of blood group active glycopeptides. The unique properties of the small intestinal glycopeptides as compared with glycopeptides of other tissue sources may be correlated with the specialized functional properties of the small intestinal epithelial cells.

L17 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1979:119465 CAPLUS
DOCUMENT NUMBER: 90:119465
TITLE: Immunosorbent method for the detection of A,B,O blood group specificity on CEA preparations
AUTHOR(S): Magous, Richard; Lecou, Christian; Bali, Jean Pierre
CORPORATE SOURCE: Lab. Biochim. Membranes, Ec. Natl. Super. Chim., Montpellier, Fr.
SOURCE: Biochemical and Biophysical Research Communications (1978), 85(4), 1453-9
CODEN: BBRCA9; ISSN: 0006-291X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The detection of A, B, O blood group specificity on some carcinoembryonic antigen (CEA) prepns. was carried out with anti-A, B, H antiserums coupled to Sepharose 4B and 125I-labeled antigens. This method was compared to the classical Farr's method. The use of immunosorbents makes the results reproducible and the sensitivity higher. Using this method, A blood group determinant was identified in 2

CEA prepns. Moreover, binding inhibition of labeled A blood group substance to anti-A antiserum by these CEA corroborated this result.

L17 ANSWER 4 OF 6 MEDLINE on STN
ACCESSION NUMBER: 95234703 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7718581
TITLE: Expression of blood group Lewis b determinant from Lewis a: association of this novel alpha (1,2)-L-fucosylating activity with the Lewis type alpha (1,3/4)-L-fucosyltransferase.
AUTHOR: Chandrasekaran E V; Jain R K; Rhodes J M; Srnka C A; Larsen R D; Matta K L
CORPORATE SOURCE: Department of Gynecologic Oncology, Roswell Park Cancer Institute, Buffalo, New York 14263, USA.
CONTRACT NUMBER: AI29326 (NIAID)
CA35329 (NCI)
SOURCE: Biochemistry, (1995 Apr 11) Vol. 34, No. 14, pp. 4748-56.
Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199505
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Last Updated on STN: 6 Mar 2003
Entered Medline: 23 May 1995

AB Blood group H type 1 [Fuc alpha (1,2)Gal beta (1,3)GlcNAc beta-->] is known as the precursor structure of the blood group determinant, Lewis b [Fuc alpha (1,2)Gal beta (1,3)(Fuc alpha (1,4))GlcNAc beta-->]. Recently, a new biosynthetic route for Lewis b from Lewis a [Gal beta (1,3)(Fuc alpha (1,4))GlcNAc-->] was identified in human gastric carcinoma cells, colon carcinoma Colo 205, and ovarian tumor. The present study demonstrates the association of this new type of alpha (1,2)-L-fucosyltransferase (FT) activity with the Lewis-type alpha (1,3/4)-L-FT as follows: (i) the alpha (1,4)- and novel alpha (1,2)-FT activities of Colo 205 were much less inhibited than the alpha (1,3)-FT activity by N-ethylmaleimide [Ki(microM) = 714.0, 119.0, and 6.5 respectively]. (ii) The alpha (1,4)- and novel alpha (1,2)-FT activities emerged from a Sephacryl S-200 column in identical positions. (iii) A specific inhibitor (copolymer from 3-sulfo-Galbeta(1,3)GlcNAcbeta-O-allyl and acrylamide) of alpha(1,4)-FT activity inhibited both alpha(1,4)- and alpha(1,2)-FT activities in Sephacryl S-200 column effluent to almost the same extent (approximately 80%); (iv) separation of the Lewis-type alpha(1,3/4)-FT from the plasma-type alpha(1,3)-FT by specific elution of the affinity column (bovine IgG glycopep-Sepharose) with lactose and further purification on a Sephacryl S-100 HR column showed that (a) the alpha(1,3)-FT activity was the inherent capacity of the Lewis-type FT (Colo 205 fraction L) since approximately 90% of both the alpha(1,4)- and alpha(1,3)-FT activities is inhibited by the copolymer, (b) the unique ability of catalyzing the alpha(1,2)-L-fucosylation of Gal in Lewis a structure and also the alpha(1,3)-L-fucosylation of Glc in lactose-based structure belonged to the Lewis type enzyme (Colo 205 fraction L), (c) a measurement of the [14C]fucosyl products arising from the two acceptors Galbeta(1,3)(4,6-di-O-Me)GlcNAcbeta-O-Bn and 3-sulfo-Galbeta(1,3)GlcNAcbeta-O-A1 (specific for alpha(1,2) and alpha(1,4), respectively) taken in the same incubation mixture showed mutual inhibition by the acceptors ([Km for the alpha(1,4)-specific acceptor, 3-sulfo-Galbeta(1,3)GlcNAcbeta-O-A], increased from 32 to 50 microM in the presence of 7.5 mM Galbeta(1,3)(4,6-di-O-Me)GlcNAcbeta-O-Bn, whereas Ki for the mutual inhibition of alpha(1,2)-FT activity by the former was 102 microM], and (d) the Lewis-type FT, in contrast to the plasma type FT, was highly effective in fucosylating complex glycopeptides. (iv) A cloned FT (FT III:Lewis type) and the Colo 205 Lewis-type FT (fraction L) showed

similar activities toward various acceptors; the enzymatic product resulting from the action of cloned FT on Galbeta(1,3)(Fucalpha(1,4))GlcNA c-beta-O-Bn was identified by FAB mass spectrometry as the difucosyl compound. (v) An examination of six human cell lines indicated that the novel alpha(1,2)-FT activity associates with the alpha(1,4)-FT activity.

L17 ANSWER 5 OF 6 MEDLINE on STN
ACCESSION NUMBER: 89174626 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2466830
TITLE: Novel polyfucosylated N-linked glycopeptides with blood group A, H, X, and Y determinants from human small intestinal epithelial cells.
AUTHOR: Finne J; Breimer M E; Hansson G C; Karlsson K A; Leffler H; Vliegenthart J F; van Halbeek H
CORPORATE SOURCE: Department of Medical Biochemistry, University of Turku, Finland.
CONTRACT NUMBER: HL-38213 (NHLBI)
SOURCE: The Journal of biological chemistry, (1989 Apr 5) Vol. 264, No. 10, pp. 5720-35.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198905
ENTRY DATE: Entered STN: 6 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 11 May 1989

AB A novel type of N-linked glycopeptides representing a major part of the glycans in human small intestinal epithelial cells from blood group A and O individuals were isolated by gel filtrations and affinity chromatography on concanavalin A-Sepharose and Bandeiraea simplicifolia lectin I-Sepharose. Sugar composition, methylation analysis, 1H NMR spectroscopy of the underivatized glycopeptides and FAB-mass spectrometry and electron impact-mass spectrometry of the permethylated glycopeptides indicated a tri- and tetra-antennary structure containing an intersecting N-acetylglucosamine and an alpha (1----6)-linked fucose residue in the core unit for the majority of the glycans. In contrast to most glycopeptides of other sources, the intestinal glycopeptides were devoid of sialic acid, but contained 6-7 residues of fucose. The outer branches contained the following structures: Fuc alpha 1-2Gal beta 1-3GleNAc beta 1- (H type 1) Fuc alpha 1-2Gal beta 1-4GleNAc beta 1- (H type 2) Gal beta 1-4 (Fuc alpha 1-3)GlcNAc beta 1- (X) Fuc alpha 1-2Gal beta 1-4(Fuc alpha 1-3)GleNAc beta 1- (Y) GalNAc alpha 1-3(Fuc alpha 1-2)Gal beta 1-3GleNAc beta 1- (A type 1) GalNAc alpha 1-3(Fuc alpha 1-2)Gal beta 1-4GleNAc beta 1- (monofucosyl A type 2) GalNAc alpha 1-3(Fuc alpha 1-2)Gal beta 1-4 (Fuc alpha 1-3)GlcNAc beta 1- (trifucosyl A type 2) The blood group determinant structures were mainly of type 2, whereas glycolipids from the same cells contained mainly type 1 determinants. The polyfucosylated glycans represent a novel type of blood group active glycopeptides. The unique properties of the small intestinal glycopeptides as compared with glycopeptides of other tissue sources may be correlated with the specialized functional properties of the small intestinal epithelial cells.

L17 ANSWER 6 OF 6 MEDLINE on STN
ACCESSION NUMBER: 79140428 MEDLINE
DOCUMENT NUMBER: PubMed ID: 746631
TITLE: Possible existence of hybrid glycosyltransferase in heterozygous blood group AB subjects.
AUTHOR: Nagai M; Yoshida A
SOURCE: Vox sanguinis, (1978) Vol. 35, No. 6, pp. 378-81.

Journal code: 0413606. ISSN: 0042-9007.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197905
ENTRY DATE: Entered STN: 15 Mar 1990
Last Updated on STN: 15 Mar 1990
Entered Medline: 16 May 1979

AB The human blood group glycosyltransferases A and B have a dimeric structure, i.e., the A enzyme is an aa dimer and the B enzyme is a bb dimer. Considering the fact that the ABO blood group determinant are not x-linked, i.e. both A and/or B genes are expressed in a given cell, a hybrid enzyme (ab dimer) may exist in heterozygous A1B subjects. Because the A enzyme, but not the B enzyme, adsorbs with Sepharose 4-B, the adsorption characteristics of the A and B enzymes from plasma fo various phenotypes were examined to look for this hybrid enzyme. The A enzyme activity from A1 plasma and from a mixture of AU and B plasma was completely adsorbed to Sepharose 4-B, while 25-50% of A enzyme activity from heterozygous A1B plasma was not adsorbed. The results indicated that heterozygous A1B plasma contains an additional enzyme component which does not exist in a mixture of A1 and B plasma, suggesting the existence of a hybrid heterodimer (ab) in heterozygous A1B subjects.

L19 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:182658 CAPLUS
DOCUMENT NUMBER: 104:182658
TITLE: Preparation of high capacity affinity adsorbents using new hydrazino-carriers and their use for low and high performance affinity chromatography of lectins
AUTHOR(S): Ito, Yuki; Yamasaki, Yohsuke; Seno, Nobuko; Matsumoto, Isamu
CORPORATE SOURCE: Fac. Sci., Ochanomizu Univ., Tokyo, 112, Japan
SOURCE: Journal of Biochemistry (Tokyo, Japan) (1986), 99(4), 1267-72
CODEN: JOBIAO; ISSN: 0021-924X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Two kinds of carriers with high concns. of hydrazino groups were prepared by simple and convenient procedures. Two hydrazino carriers were obtained on incubation of epoxy-activated carriers with hydrazine hydrate or adipic acid dihydrazide. Disaccharides were coupled to the hydrazino carriers through reductive amination in the presence of Na cyanoborohydride. The reaction time was much shorter (24 h) than that in the case of the method involving amino-Sepharose 6B (800 h) described by J. Matsumoto et al. (1981). The glycamyl-Sepharose thus obtained showed high adsorption capacities for lectins. Glycamyl-TSK-Gel G300 PW obtained by the same method with TSK-Gel G3000 PW, which is a hydrophobic vinyl polymer matrix for high-performance gel permeation liquid chromatog., could be successfully used for the high-performance liquid affinity chromatog. of lectins. N-Acetylglutamic acid was coupled to hydrazino-Sepharose 4B in the presence of N-ethoxycarbonyl-2-ethoxy-1,2-dihydroquinoline. The adsorbent obtained was used for the affinity chromatog. of Japanese horseshoe crab lectin.

L19 ANSWER 2 OF 4 MEDLINE on STN
ACCESSION NUMBER: 86223920 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3711062
TITLE: Preparation of high capacity affinity adsorbents using new hydrazino-carriers and their use for low and high performance affinity chromatography of lectins.
AUTHOR: Ito Y; Yamasaki Y; Seno N; Matsumoto I
SOURCE: Journal of biochemistry, (1986 Apr) Vol. 99, No. 4, pp. 1267-72.
Journal code: 0376600. ISSN: 0021-924X.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198607
ENTRY DATE: Entered STN: 21 Mar 1990
Last Updated on STN: 21 Mar 1990
Entered Medline: 14 Jul 1986

AB Two kinds of carriers with high concentrations of hydrazino groups were prepared by simple and convenient procedures. Hydrazino-carriers (I) and (II) were obtained on incubation of epoxy-activated carriers with hydrazine hydrate and adipic acid dihydrazide, respectively. Disaccharides were coupled to the hydrazino carriers through reductive amination in the presence of sodium cyanoborohydride. The reaction time was much shorter (24 h) than that in the case of the method involving amino-Sepharose 6B (800 h) [Matsumoto, I., Kitagaki, H., Akai, Y., Ito, Y., & Seno, N. (1981) Anal. Biochem. 116, 103-110]. The glycamyl-Sepharose thus obtained showed high adsorption capacities for lectins. Glycamyl-TSKgel G3000 PW obtained by the same method with TSKgel G3000 PW, which is a hydrophobic vinyl polymer matrix for high performance gel permeation liquid chromatography,

could be successfully used for the high performance liquid affinity chromatography of lectins. N-Acetylglutamic acid was coupled to hydrazino-Sepharose 4B (I) in the presence of N-ethoxycarbonyl-2-ethoxy-1,2-dihydroquinoline. The adsorbent obtained was used for the affinity chromatography of Japanese horseshoe crab lectin.

L19 ANSWER 3 OF 4 MEDLINE on STN
ACCESSION NUMBER: 82066647 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7305294
TITLE: Preparation of monospecific anti-Salmonella lipopolysaccharide antibodies by affinity chromatography.
AUTHOR: Girard R; Goichot J
SOURCE: Annales d'immunologie, (1981 Mar-Apr) Vol. 132C, No. 2, pp. 211-7.
Journal code: 0353045. ISSN: 0300-4910.
PUB. COUNTRY: France
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198201
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 16 Mar 1990
Entered Medline: 20 Jan 1982

AB The use of immunoadsorbent obtained by coupling aminohexyl-sepharose 4B with Salmonella lipopolysaccharide (LPS) by means of benzoquinone enabled us to obtain anti-O monospecific immune sera which can be used for a quick serological identification of some species of Salmonella in the course of a diagnosis. In this paper we describe a method for binding the LPS extracted from S. typhi-murium with aminohexyl-sepharose 4B, insoluble matrix as well as the preparation of monospecific anti-O5 antibodies from plurispecific anti-S. haifa rabbit immune sera. This separation of anti-O monospecific antibodies by affinity chromatography, avoids the repeated and often tedious adsorption of anti-Salmonella immune sera by the whole corresponding bacteria. Such immunoabsorbents can be used several times without appreciable loss of their affinity properties.

L19 ANSWER 4 OF 4 MEDLINE on STN
ACCESSION NUMBER: 74009534 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4517938
TITLE: Resolution of DL-tryptophan by affinity chromatography on bovine-serum albumin-agarose columns.
AUTHOR: Stewart K K; Doherty R F
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1973 Oct) Vol. 70, No. 10, pp. 2850-2.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197312
ENTRY DATE: Entered STN: 10 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 14 Dec 1973

AB Bovine-serum albumin, known to have antipodal specificity in the binding of tryptophan, was selected as the affinity chromatographic matrix for the attempted chromatographic resolution of DL-tryptophan. Complete resolution was accomplished when Dl-tryptophan was chromatographed on bovine-serum albuminsuccinoylaminoethyl-Sepharose.

L20 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1982:622807 CAPLUS
DOCUMENT NUMBER: 97:222807
TITLE: Preparation of adsorbents for pyrogen adsorption
AUTHOR(S): Minobe, Satoshi; Watanabe, Taizo; Sato, Tadashi; Tosa, Tetsuya; Chibata, Ichiro
CORPORATE SOURCE: Dep. Biochem., Tanabe Seiyaku Co. Ltd., Osaka, Japan
SOURCE: Journal of Chromatography (1982), 248(3), 401-8
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The removal of pyrogens by adsorption was investigated by selecting ligands such as purine, pyrimidine or imidazole residues, matrices and chain length of the spacers which were suitable for the preparation of adsorbents. Aminoalkyl agaroses were prepared by either the CNBr-
or the epichlorohydrin activation procedure. Other aminohexyl synthetic resins were prepared from hexamethylenediamine and the resin. Ligand contents were determined either by the ninhydrin method or by measuring absorbance at 260-340 nm. The affinity of each absorbent for pyrogen was measured by a column method. Cellulose and agarose were the most suitable among the matrices tested, and all compds. tested showed a high affinity for pyrogen. Adenine, cytosine, histamine and histidine had the highest affinity for pyrogens (concentration <1 ng/mL). The affinity of adsorbents for pyrogens increased with an increase in the chain length of the spacer and resulted in a plateau when the chain length was 19.7-29.0 Å. The adsorbent prepared from histamine immobilized on aminohexyl-Sepharose CL-4B had high affinity for pyrogens originating from Escherichia, Klebsiella and Salmonella cells.

L20 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1980:193280 CAPLUS
DOCUMENT NUMBER: 92:193280
TITLE: Efficient purification of a microbial steroid-1-dehydrogenase by electrophoretic desorption from the affinity matrix on a preparative scale
AUTHOR(S): Atrat, P.; Deppmeyer, V.; Hoerhold, C.
CORPORATE SOURCE: Res. Cent. Mol. Biol. Med., Acad. Sci. G.D.R., Jena, 69, Fed. Rep. Ger.
SOURCE: Journal of Chromatography (1980), 189(2), 279-83
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Steroid-1-dehydrogenase (EC 1.3.99.4) from Nocardia opaca was purified 625-fold (compared to the cell-free extract) with a yield of 80% by affinity chromatog. on N-(4-androsten-3-on-17β-oxycarbonyl)-ε-aminocaproyladipinic acid dihydrazide-Sepharose 4B (I) and subsequent desorption of the enzyme by disc gel electrophoresis on polyacrylamide. This procedure resulted in greater purity and efficiency as compared with elution of the same matrix with 70% ethylene glycol or a combined procedure including chromatog. on aminododecyl-Sepharose and affinity chromatog. The polyacrylamide slice containing the enzyme can be used for further expts., only 10% loss of activity being observed within 12 mo of storage. The desorption of the enzyme from I by electrophoresis was 100%, whereas that from an analogous affinity matrix with an aminododecyl group as spacer was 96.0%, and that from a 3rd affinity matrix with an aminohexyl group as spacer was 83.7%. The different electrophoretic behavior of the matrixes is caused by the greater ionic character of the matrixes containing the aminododecyl and aminohexyl spacers compared to I.

L20 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1979:117165 CAPLUS
DOCUMENT NUMBER: 90:117165
TITLE: Temperature dependence, activation energy and enthalpy change of the binding process of UDP-galactose 4'-epimerase to its immobilized substrate
AUTHOR(S): Haigis, Erich; Haeuptle, Marie Theres; Gitzelmann, Richard
CORPORATE SOURCE: Dep. Pediatr., Univ. Zurich, Zurich, Switz.
SOURCE: Affinity Chromatogr., Proc. Int. Symp. (1978), Meeting Date 1977, 95-7. Editor(s): Hoffmann-Ostenhof, O.; Breitenbach, M.; Koller, F. Pergamon: Oxford, Engl. CODEN: 39QEAS
DOCUMENT TYPE: Conference
LANGUAGE: English
AB UDP-galactosamine-succinyldiaminooctyl-Sepharose 4B was synthesized and used to study the temperature dependence of binding of UDP-galactose 4'-epimerase to its immobilized substrate. The temperature dependence of binding was studied using the substrate-spacer-gel in suspension. The activation energy (Ea) of binding was calculated to be 37kJ/mol (9 kcal/mol) from Arrhenius plots. The enthalpy (ΔH) of binding was -42 kJ/mol (-10 kcal/mol). These values are in the range estimated for other interactions between small mols. and enzymes. Apparently, the spacer arm does not impair the affinity of enzyme for matrix-bound substrate, and the calculated values for Ea and ΔH are reasonable approxns. of those for free substrate.

L20 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1978:70967 CAPLUS
DOCUMENT NUMBER: 88:70967
TITLE: Immobilized lipoamide dehydrogenase. 3. Preparation and properties of an immobilized polythiolated enzyme
AUTHOR(S): Lowe, Christopher R.
CORPORATE SOURCE: Dep. Physiol. Biochem., Univ. Southampton, Southampton, UK
SOURCE: European Journal of Biochemistry (1977), 76(2), 411-17 CODEN: EJBCAI; ISSN: 0014-2956
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pig heart lipoamide dehydrogenase (I) was polythiolated with N-acetylhomocysteine thiolactone, introducing 5-6 mol addnl. SH groups/mol FAD. Free polythiolated I has a 50-60% lower sp. activity, a reduced affinity for specific antibody, but an unchanged apparent Km. Free polythiolated I containing 6 mol SH/mol FAD and 7 mol SH/mol FAD were 270% and 640%, resp., more stable thermally than free native I. Immobilization of polythiolated I to thiolated 6-aminohexyl-Sepharose reduced sp. activity to <10% of that of free native I, raised the apparent Km, and lowered affinity for specific antibody. Thermal stability was enhanced by ≤25-fold. Immobilization of polythiolated I to a short spacer group, L-cysteiny-Sepharose, reduced sp. activity but enhanced thermal stability and stability in aqueous dioxane by 800% and 770%, resp., relative to free native I. These data are discussed in terms of the effects of proximity to the matrix backbone. The marked improvement in stability of polythiolated I was matched by that of I immobilized directly to CNBr-activated Sepharose. However, in this case, the sp. activity of the immobilized I was 300-350% less than that of the polythiolated I. These data are discussed in terms of multiple attachment of I to the matrix and the possibility of SS crosslinks in polythiolated I.

L20 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1977:498114 CAPLUS
DOCUMENT NUMBER: 87:98114
TITLE: The stability of lipoamide dehydrogenase immobilized to agarose through spacer molecules of

various lengths

AUTHOR(S): Lowe, C. R.
CORPORATE SOURCE: Dep. Physiol. Biochem., Univ. Southampton, Southampton, UK

SOURCE: Biochemical Society Transactions (1977), 5(1), 253-5
CODEN: BCSTB5; ISSN: 0300-5127
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Pig heart lipoamide dehydrogenase (EC 1.6.4.3) (I) was coupled to the thiolated terminal amino groups of ω- aminoalkyl-Sepharose gels containing 2-10 methylene groups to give 0.4-0.5 nmol I/g moist weight of gel; exposure of immobilized I to 90° for ≤30 min showed that the first-order rate constant for thermal inactivation of I at 90° was a function of the number of atoms in the spacer mol. The first-order rate constant for thermal inactivation at 90° was 0.09/min when I was close to the matrix backbone and was similar to that of native I (0.141/min) when the spacer mol. contained 15 atoms. The rate consts. for inactivation of I in 30% dioxan increased with increasing distance from the matrix and eventually approached that for inactivation of native I (0.01/min). The hydrophilic Sepharose matrix probably holds I in a rigid conformation and thus the nearer I is to the matrix backbone, the greater its stability.

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=> d his

     (FILE 'HOME' ENTERED AT 12:33:24 ON 23 JUL 2007)

     FILE 'CAPLUS, MEDLINE' ENTERED AT 12:33:37 ON 23 JUL 2007
L1             1 S ?AMINOALKYL AGAROSE (P) HEPARIN?
L2             0 S ?AMINOALKYL AGAROSE (P) POLYSACCHARIDE?
L3             1 S ?AMINOALKYL AGAROSE (P) ?SACCHARIDE?
L4             0 S ?AMINOALKYL AGAROSE (P) CARBOHY?
L5             0 S ?AMINOPHENYL AGAROSE (P) CARBOHY?
L6             2 S ?AMINOPHENYL AGAROSE (P) ?SACCHARIDE?
L7             0 S ?AMINOPHENYL SEPHAROSE (P) ?SACCHARIDE?
L8             0 S ?AMINOPHENYL SEPHAROSE (P) ?CARBOHY?
L9             2 S ?AMINOALKYL? SEPHAROSE (P) ?SACCHARIDE?
L10           37 S ?AMINO? SEPHAROSE (P) ?SACCHARIDE?
L11            2 S L10 AND FILTRATION?
L12           35 S L10 NOT L11
L13            0 S L12 AND AUTOCLAV?
L14           10 S L12 AND COUPL?
L15           27 S L10 NOT L14
L16            0 S ?AMINO? SEPHAROSE (P) BLOOD GROUP DETERMIN?
L17            6 S  SEPHAROSE (P) BLOOD GROUP DETERMIN?
L18           49 S ?AMINO? SEPHAROSE (P) MATRI?
L19            4 S L18 AND ?SACCHARIDE?
L20            5 S L18 AND ?SPACER?
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